UNIVERSITY OF GONDAR

FACULITY OF VETRINARY MEDICINE

DEPARTMENT OF ANIMAL PRODUCTION AND EXTENSION

ASSESSMENT OF CATTLE FATTENING PRACTICE AND MARKETING SYSTEM IN GONDAR TOWN

SENIOR RESEARCH PROJECT REPORT

BY

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ASRAT TESAW

MAY, 2015

GONDAR, ETHIOPIA

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SENIOR RESEAR PROJECT REPORT SUBMITTED TO DEPARTMENT OF ANIMAL PRODUCTION AND EXTENSION, IN PARTIAL FULFILMENT OF THE REQUREMENTS FOR BACHLOR OF SCIENCE DEGREE IN ANIMAL PRODUCTION AND EXTENSION

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LIST OF ABREVATION

BOARD	Bureau of Agriculture and Rural Development
BOFED	Bureau of Finance and Economic Development
CSA	Central Statistics Authority
ETB	Ethiopian Birr
FAO	Food and Agricultural Organization
FDRE	Federal Democratic Republic of Ethiopia
MOA	Ministry of Agriculture
MOEDAC	Ministry of Economic Development and Cooperation
MOFED	Ministry of Finance and Economic Development

ACKNOWLEDGEMENT

It is not possible to thank all those people and institutions who have helped me in accomplishing my thesis research work, but the following deserve a special mention. First and Fore most we would like to thank my advisor Mr.Shewangzaw Addisu, in supporting us the required materials, offering constructive comments, guiding and encouraging us in all moments since the research proposal preparation without exaggeration, the finalization of this thesis report would have been hardly possible without his guidance and heart full support.

My deepest tanks go through our best friend Ayele Afelew, for his borrowing laptop which helped us to accomplish the thesis in writ time. We would like to express our deep thanks to our families.

ABSTRACT

A study was conducted from January to May, 2015 with the objective to assess cattle fattening and marketing system in Gondar town by interviewing 30 cattle fattener households selected from three kebeles purposively. Fattening length and age for oxen were 3 months and 7 years, respectively. Household source of income were livestock production (40%). Half of the respondents were selecting red coat colour cattle's for fattening and 80 % of them are castrating male animals before the commencement of fattening. Marketing fattened animals during main holidays. The price was highest from February to June, where as low from September to January. Major sources of feed used for fattening cattle were Bean straw (26.67%), Nug cake (23.33%), Chick pea (16.67%), Wheat bran (13.33%), Barely straw (10%) and Teff straw and hay (3.33%). Lack of capital (40%) were the main constraint to begin cattle fattening and other constraints were feed shortage, shortage of land, and animal health problem in order of importance 26.67, 16.67, 10, 6.67%, respectively. Therefore, from the present study, it can be conclude that cattle fattening in Gondar town is one of the potential strategy to improve the livelihood of the family.

***Key words*:** Cattle Fattening, Gondar, Marketing

1. INTRODUCTION

Ethiopia is endowed with largest livestock production. As the country has a large livestock population, which ranks first in Africa and tenth in the world, it has much to gain from the growing global markets for livestock products (SPS-LMM, 2010). The livestock population of Ethiopia is estimated to be 47 million cattle, 26.12 million sheep, 21.71 million goat, 5.55 million donkey, 1.78 million horse, 0.38 million mule, 1 million camel and 53 million poultry (CSA 2007/08). In Ethiopia, agriculture is the main economic activity and more than 80% of Ethiopian population is dependent on agriculture of which livestock play a very important role (Bureau of Africa affairs 2006http://www.state.gov/r/pa/bgn/2859.htm)

In Ethiopia, agriculture is the main economic activity and more than 80% of Ethiopian population is dependent on agriculture of which livestock play a very important role (SPS-LMM, 2010). According to (BOFED) report (2004), the agricultural sector in the Amahara region contributed nearly 64% to the regional GDP between the period 1994 to 2001.The crop sector takes the lion's share (61%) and forest covering 12% of the total 3.2 million hectares cultivated area. The area under irrigation and improved seeds was 1.77 and 2.72 % respectively while the area applied with fertilizer was 33 % (CSA, 2000).

Between 1974 and 1998, human population increased by 78% while cattle population increased by 31%, and small ruminant population decreased by 5.6% Annual growth rate for human population was 2.5% while that for cattle and small ruminants was 1.1 and –0.2%, respectively. During the same period meat, milk and skins and hides production have increased by 23.8, 42.7 and 5.7%, respectively (FAO 1999).

Despite the large number of livestock, there has been a decline in national and per capita production of livestock, livestock products, export earnings from livestock, and per capita consumption of food from livestock origin since 1974, in comparison to other African countries (Assegid 2000). Among exports of livestock products, skins and hides have the largest share of

exports followed by live animals (MEDAC 1998; FAO 1999). In recent years, exports of live animals to the Middle Eastern countries, the traditional outlet for Ethiopian animals, have substantially decreased since these countries have imposed ban on imports of live animals from the Horn of Africa due to prevalence of certain diseases such as Rift Valley fever.

In Ethiopia according to CSA (2003), 99.4 % of the total cattle populations in the Country are local breeds and the remaining are the hybrids and the exotic breeds that accounted for about 0.5 % and 0.1 %, respectively. Indigenous cattle have been naturally selected for adaptive rather than for productive traits. Selection takes a long time and requires sustained effort to make substantial genetic progress and impact on productivity. However, due to high genetic variability among those indigenous animals, there is a potential to select for productive traits. There are some individual animals with relatively high meat production. Indigenous cattle are preferred to adaptive attributes. Subsistencially smallholders select particularly fattened animals for a range of desirable attributes of their animals, but some of them attributes are related to behavior and body form of animals, which are not necessarily direct related to production functions (Bondoc *et al*., 1989, Dereje, 2005).

Ethiopia is characterized by a high livestock population but low productivity, at least in terms of conventional products such as meat and milk. Meat production and consumption is important in the Ethiopian economy and ruminants contribute over 3.2 million tons, representing over 72% of the total meat production (Nigusse, 2001). As cattle population has not kept up with the rate of population growth, there is a strong unsatisfied demand, in the majority of tropical countries, for milk and meat. However, the actual consumption is seriously restricted by the low purchasing power of the majority of the consumers, for whom retail prices are already too high. At the other extreme, the producer is in a difficult position and the course taken, notably for beef, does not allow to envisage the introduction of more intensive techniques, the only ones which would enable an increase in production when the limits of expansion of the pasture area are reached (Reag,1992).

Crop-Mixed farming system is the predominant farming systems in the highland of Ethiopia. They inhabit nearly 90% of the human population and 70% of the livestock population of the

country (Mohamed-Saleem and Abate, 1995). Due to the rising of population growth, lack of land pushing many farmers either to intensify the cropping system or diversify the system using other, integrated activities.

1.1. Statement of the Problem

Gondar town was estimated to have less supply of crop-residues; there may be mishandling and lack of awareness about crop-residue improvement. As a result, utilization efficiency of the residues may be low. Besides, there may be lack of proper selection of fattening cattle, fattening practice, lack of market information and also poor managements in relation to feeding system, healthcare, housing etc. Which may lower the performance of cattle fattening? Hence, the producer may not get reasonable benefit from their fattening activity unless appropriate improvement strategies have to be introduced.

1.2. Justification of the Study

Despite good fattening practice associated with excess crop-residue production, market access and suitable cattle breeds have been expected in Gondar town, because little attention given to livestock development in general and cattle fattening practice in particular and much has not been studied about utilization of the available feed resources, fattening practices and marketing system of cattle in the area. Cattle fattening practice and marketing system was under developed which needs deep-investigation about the management and its performance. Thus, on the basis of this background, the current study was initiated to address some research questions about improvement strategies of cattle fattening practices and marketing system in Gondar town.

1.3 OBJECTIVE

1.3.1 General Objective

The general objective of this study was to assess cattle fattening practices and marketing system in Gondar town.

1.3.2 Specific Objectives

- To assess cattle fattening practices on-farm level.
- To evaluate marketing system of cattle fattening in Gondar town.
- To assess major constraints of cattle fattening in Gondar town.
- To identify major feed and feed source of fattening cattle in Gondar town.

2. LITRURE REVIEW

2.1. Classification of livestock Production System in Ethiopia

Livestock production systems in which more than 90 percent of dry matter fed to animals comes from rangelands, pastures, annual forages and purchased feeds and less than 10 percent of the total value of production comes from non-livestock farming activities. According to the report of (H. Steinfeld and J. Mäki-Hokkonen, 2000) livestock production classified into five.

2.1.1. Landless livestock production systems (LL). Subset of the solely livestock production systems in which less than 10 percent of the dry matter fed to animals is farm-produced and in which annual average stocking rates are above ten livestock units (LU) per hectare of agricultural land.

2.1.2. Grassland-based systems (LG). Subset of solely livestock production systems in which more than 10 percent of the dry matter fed to animals is farm-produced and in which annual average stocking rates are less than ten LU per hectare of agricultural land.

2.1.3.Mixed-farming systems (M).Livestock systems in which more than 10 percent of the dry matter fed to animals comes from crop by-products or stubble or more than 10 percent of the total value of production comes from non-livestock farming activities.

2.1.4. Rain-fed mixed-farming systems (MR). A subset of the mixed systems in which more than 90 percent of the value of non-livestock farm production comes from rain-fed land use.

***2.1.5. Irrigated mixed-farming systems (MI*).** A subset of the mixed systems in which more than 10 percent of the value of non-livestock farm production comes from irrigated land use.

2.2. Cattle Fattening in Ethiopia

2.2.1. Fattening Systems

According to MOA (1996), cattle fattening practice in Ethiopia categorized in to three major fattening systems.

2.2.1.1. Traditional systems

In such type of systems, oxen are usually sold after the plowing season when they are in poor condition. Meat yields are low, the beef is of poor quality and the farmer returns are often inadequate to buy a replacement ox. This is obvious scope to improve this traditional and inefficient system through strategic feeding of good quality forage to fatten animals before they are sold, or to buy and fatten animals sold by others. In the low lands, where pastoralists do not use cattle for draft, cattle are sometimes fattened on natural pasture in good seasons. In average or poor seasons, low land cattle are rarely fattened and often have to be sold in poor condition at low prices.

2.2.1.2. By-product Based fattening

This is a type of fattening in which the agro-industrial by-product such as molasses, cereal milling by-product and oilseed meals are the main sources of feed. In this system grazing land is completely unavailable and crop-residues are only significant roughage source.

2.2.1.3. The Hararghe fattening system

In this system peasants buy young oxen from the adjacent lowlands pastoral areas, use them for several years, and then fatten and sell them before they become old and emaciated. The system is largely based on cut-and carries feeding of individual tethered Animals. Grazing is rare, few concentrate are used. Typically smallholders purchase oxen from the rangelands (through traders) use them as draught animals for some years and then fatten them prior to sale. The oxen are fattened successfully on farm products alone. The relative close proximity of the Province's

smallholders to pastoralists in the rangeland areas enables Hararghe farmers to keep relatively more efficient herds (in terms of rates of conversion of animal feed into draught power and other livestock products) than is the case in the central highlands (ibid).

2.3. Relative importance of fattening

In the context of rural income diversification, the livestock sector has a key role to play. In this regard, both the Rural Development Strategy federal democratic republic of Ethiopia (FDRE,2003) and the Poverty Reduction Strategy Paper Ministry of finance and economic development (MoFED, 2002) emphasize the role that the livestock sector can play in poverty reduction, employment creation and income generation. One of the short-term avenues programmed to pave the way for such sectoral development strategies has been market oriented fattening of ruminant livestock. While the tendency in developed countries is to produce meat animals with a decrease in fatness at the appropriate market weight and an increase in growth-rate and mature size, animals with higher degree of fatness regardless of size and weight fetch a higher premium in most tropical countries (Kassahun, 2000). This is particularly true in Ethiopia where during festivities, lambs and Wethers with higher fat cover are also priced high.

2.4. Selection criteria and length of cattle fattening in Ethiopia

Takele *et al*. (2009) and BoARD (2004), fatteners in northern part of Ethiopia select fattening cattle of tall height, good body condition and big and stand-high hump in addition to coat color and sex. Contrary to these results, almost all traders in Amhara region of Ethiopia do not take coat color as a criterion for selection of beef animals (Belete *et al*., 2010). After plowing, when the plowed oxen become older and suspected as if the oxen could not able to plow for the next season, farmers decide to fatten their oxen and supplied for the market to replace young plowing oxen for cultivation. Moreover, some rural farmers and semi-urban dwellers have experienced fattening by purchasing emaciated older plowed oxen from the surrounding market and sold after some months of feeding period to get profit.

Takele *et al. (*2009) and BoARD (2004) who reported that cattle feeders fed cattle usually for 4 months in southern Ethiopia and northern Ethiopia **.** Takele *et al*. (2009) who reported that cattle

fattening is a seasonal operation peak from June to September and this is governed by seasonality pattern of feed availability and main holidays.

MOA (1996a) reported that the age and duration of fattening cattle in western part of the country were one years old and for 6 months, respectively. According to Habtemariam (2000), farmers in east Ethiopia fed oxen for more than one year which is also significantly exceeds the average fattening length in southern parts of Ethiopia**.**

2.5. Performance Assessment of Cattle Fattening

The genotype of tropical breeds is not generally the factor which limits beef production, at least with the modest level of environmental control which still prevails in the majority of tropical countries. The prey condition for animal performance under the prevailing ecological and economic conditions improved, detailed information is needed on the specific functions of cattle in production systems, on their performance potential under different levels of management, and on the current disease situation Such information can be consider through performance testing on stations and on farms. On-farm performance testing provides information on location-specific Production conditions and location-specific performance of individual animals or breeds, as well as on breed improvement options appropriate to particular systems (Peters and Thorpe, 1989).

Breed differences seem to be less important for the productivity of African cattle than environment and management influences. Major production constraints are associated with management and husbandry, the nutrition × disease complex and the seasonality of feed availability, especially in traditional system with communal grazing (Peters and Thorpe, 1989).

2.6. Marketing system of fattening cattle in Ethiopia

In Ethiopia, the marketing process in general follows a three-step system with primary, intermediate and terminal market (export market) through which marketable animal and animal products pass from producers to small traders and on to large traders and/or butchers. However, most producers sale their stock and livestock products at local markets directly to consumers or small traders at relatively low prices without exception markets are open places in villages and towns. Distance from the market, poor trekking routes and lack of holding grounds create

unfavorable conditions for producers forcing them to sell their stock at low prices. Marketing of livestock is not determined on the basis of their weight and quality, but by direct tiresome bargaining between buyers and sellers. Due to these unfavorable marketing systems and the discouraging price on the producers' side they are not encouraged to improve the quality and the off-take of their animals (Alemayehu, 2003).

In Ethiopia, both legal and illegal livestock marketing systems are operating at different magnitudes. Small farmer exporters and traders are the major actors in the illegal cattle marketing system while medium- to large scales licensed exporters are dominantly operating in the legal system. Most cattle sales are related to farm households' cash needs and commercial orientation. However, cattle sales are also induced by fear of theft and insecurity (Elias *et al* 2007).

Ayele *et al*(2003) reported that current knowledge on livestock market structure, performance and price is poor and inadequate for designing policies and institutions to overcome perceived problems in the marketing system. According to (Belachew, 2004; Takele *et al*., 2009) the market price of fattened cattle was highest from September to April. Reason for this might be due to the availability of the main holidays in September (*meskel)*, December *x-mas.*

Rashid (1969). He said that marketing channel referred to the sequential arrangement of various marketing intermediaries involved in the movement of products from production to consumers.

2.7. Feed Resources and Feeding Systems in the Highlands of Ethiopia

The availability of feed resources in the highlands of Ethiopia depends on the mode and intensity of crop production as well as population pressure. The major basal feed resources in these areas are natural pasture, crop residues and stubble grazing, and their contribution to the total feed resource base vary from area to area based on cropping intensity (Seyoum *et al.*, 2001). Animals will depend more on crop residues during the dry season. Besides natural pasture, the contribution of stubble and fallow land grazing is significant beginning from the end of cropping season just after harvesting. During this period, livestock can have free access to grazing of crop fields. Standing hay that is closed during the wet season is also open at the end of the cropping

season (FAO, 2001). Takele *et al*. (2009) in southern region and (Belete *et.al*, 2010) in Amhara region of Ethiopia. Major feed resources used as a basal diet for fattening cattle were crop residues. Farmers in southern Ethiopia provide both basal and supplementary feeds in a stall feeding system.

Solomon (2004) noted that crop-residues and stubble grazing accounted for 74.15% of the total annual feed supply which was the major source of feed starting from harvesting of food crops to the wet periods during the time at which feed from grazing areas is inadequate or almost unavailable in Sinana sub district. Livestock, therefore, depend on the straw from cereal crops, especially during dry periods when there are limited feed supplies from grazing land

2.8 Major constraints affecting cattle fattening in Ethiopia

Belete *et al*. (2010) reported that shortage of capital was the first constraint to cattle fattening in Amhara region of Ethiopia. Getnet (2003) reported that feed quality and quantity is the main limitation to animal production in Ethiopia. Inadequate feed supply, both in terms of quantity and quality, is the major constraint affecting livestock production in Ethiopia. Feed scarcity is indicated as a factor responsible for the lower reproductive and growth performance of animals especially during the dry season (Legesse, 20008).

3. MATERIAL AND METHOD

3.1. Description of the Study Area

The study was conducted in Gondar town which was located in the north western part of Ethiopia and its varied landscape, dominantly covered with ragged hills and plateau formations, imparts variable temperatures largely favoring a wide range of illnesses. Gondar was an old town established in 1636 by fasillades.

Gondar town was approximately located between elevation 2133m1235' 60"N latitude and 3728' 0.120"E longitude (2012).Gondar town was located north of Addis Ababa at a distance of 720 km,60km east from lake tana,175 km from Bahir Dar and 150km at the foot hill of semen mountain with elevation 2300m above sea level. The mean monthly temperature of Gondar was range from 14^0c to 20 ^{0}c. Due to its elevation the annual average temperature was 19.7^0c and annual rainfall of Gondar 1772 mm. It could be categorized under wineadega climatic zone. Gondar was one of the reform towns in the region and has a city administration, city service office, 12 sub-cities, 12 urban kebelles, and 10 rural kebeles. The town has a structural plan which was prepared in 2004.cattle population calf 5681,heifer 5025,cow 9999, bull 2143 and human Population male 143519 and female 155146 (CSA 2006)

3.2. Data source and type

On this study both primary and secondary data was employed. The primary data was obtained through questionnaire which was distributed for the selected sample and semi structured interview with the concerned bodies: such as owner of cattle fattener. The secondary data were gathered from the reference book, internet and other.

The qualitative parameters included gender participation in the cattle fattening farm, the background of the cattle owner, reasons for doing fattening, main constraints for cattle fattening and market system.

The quantitative parameters included the family size of the households, total cattle number of the households, number of fattening cattle and length of fattening.

3.3. Sampling Technique

Purposive sampling techniques were employed to select 30 cattle fattener households from three kebeles. From the individual who participate in cattle fattening practice, the owners of cattle fattener in Gondar town were the target population of the study.

3.4. Statistical analysis

The collected data were analyzed statistically by using Excel.

4. RESULT AND DISSCUSION

4.1. Characteristics of household

From the total of respondents the average family size of the households was 6 (ranging from 1-8). Majority of the household heads in the study area were married and the male family can be participate in fattening activity. While the age (31-40) of the respondent (66.67 %) highly participate in fattening practice. The major occupation of houholds in the study area was identified as livestock production, trade and livestock and crop, 40, 23.33, 26.33 % respectively. The educational statues of the respondents were, (1-4), (5-8), (9-12) and above 13.3,20, 46.67, 20% respectively. The respondent whose educational level (9-12) highly participating in cattle fattening practice the reason why this person start cattle fattening was to change their living standards by creating their own business

Table 4.1. Characteristics of the households

Sex	**Respondents**	**%**
Male	24	80
Female	6	20
Age(year)		
20-30	9	30
31-40	20	66.67
Above	1	3.33
Educational level		
1-4	4	13.3
5-8 (elementary)	6	20
9-12 (secondary)	14	46.66667
Above (higher education)	6	20
Source of income		
Livestock production	12	40
Crop and livestock	8	26.67
Trade	7	23.3
Other	3	30

The results of the present study were in line with Hossain *et al*. (2002) the average age of the respondent participate in fattening range from 27 to 40 years. In the study area large number of fattener age range from (31-40) which was (66.67 %) of the respondent.

4.2 Cattle fattening practice

Cattle fattening practice was assessed considering the general husbandry issues like major feed resources, source of fattening cattle, selection criteria for purchasing of fattening cattle, method and length of feeding and season of fattening **.** The time for fattening was time bounded and adjusted with their regular buyers.

4.2.1 Selection criteria of fattening cattle

From the total of household respondents indicated that red colour (50%) cattles were the most preferable for fattening purpose and bulla, Black, White, 26.7, 10, 13.3% respectively. Castration of animals was also a criterion for fattening in the study area. Accordingly 80% of the respondents castrate their animals for fattening while the remaining 20 % of the respondents were not recommend for castration.

Majority of the respondents fatten only male cattle (83.33%), where as some of the respondents fatten both male and female animals (16.67%) in the study area. In addition to the above criterions, all farmers purchased fattening cattle, good body condition, Health, Adaptation, breed and big and stand-high hump.

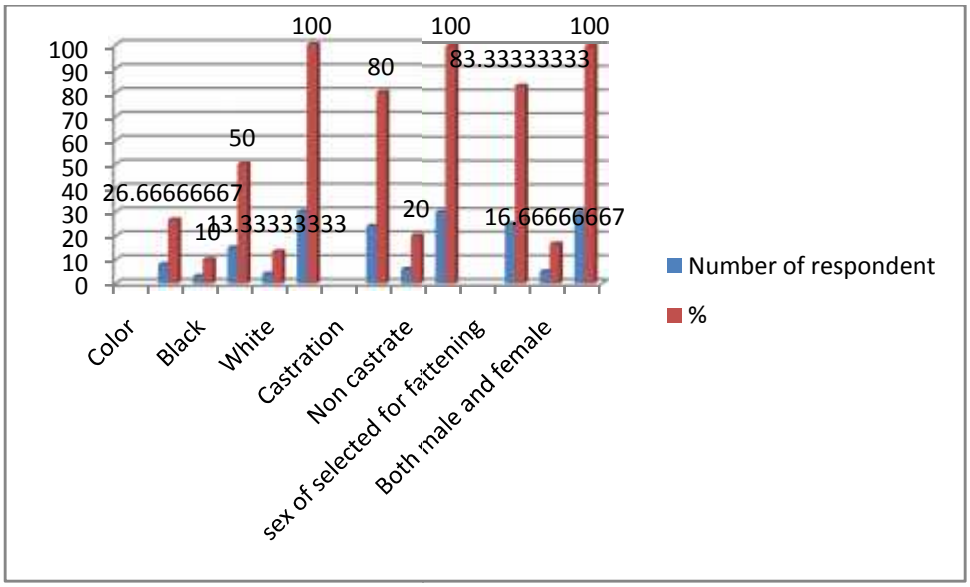

Fig 4.1 Parameters of cattle selecting and castration for fattening purpose

The present study were in line with Takele *et al*. (2009) and BoARD (2004), fatteners in northern part of Ethiopia select fattening cattle of tall height, good body condition and big and stand-high hump in addition to coat color and sex.

4.2.2. Age and Duration of cattle fattening

The fattener in the study area fatten mature and much older animals 7-8 years old (53.33%), for short durations (usually three months) (83.33%), 3.5 months (13.33%), 4 months (3.33%) of the respondents. Feeding length was dependent on feeding method in that the cattle being fatten with pure feedlot finished within 3 months of feeding length.

Table 4. 2. Length of cattle fattening and Age of fattening cattle

	Respondents	%
Duration		
3(month)	25	83.3
3.5(month)	4	13.33
4(month)	1	3.33
Total	30	100
Age of fattening cattle in year		
7 to 8	16	53.33
6 to7	8	26.67
Above	6	20
Total	30	100

The present findings differ with that of the report of Takele *et al*. (2009) and BoARD (2004) who reported that cattle feeders fed cattle usually for 4 months in southern and northern Ethiopia, respectively. Also in contrast with Habtemariam (2000), farmers in east Ethiopia fed oxen for more than one year which is also significantly exceeds the average fattening length in southern parts of Ethiopia**.**

4.2.3. Method to decide the end of finishing period fattening cattle

From the total of respondents in deciding the end of finishing period of fattening cattle in the study area were anticipated current and future prices (40 %), by considering rate of live weight change (56.67%) and by calculating feeding length (3.33%) of the respondent.

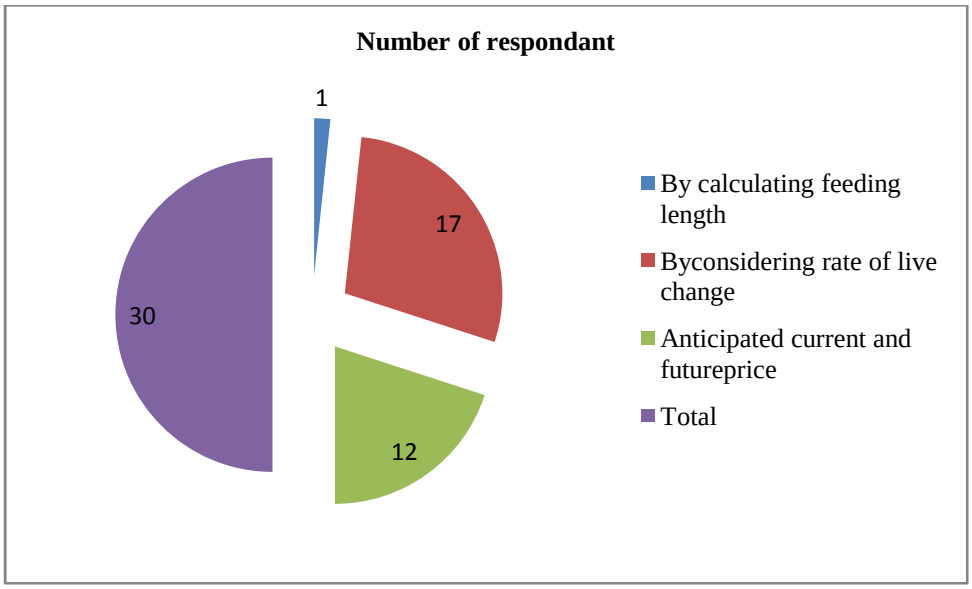

Fig 4. 2 Decisions on end of cattle fattenining finishing period

The present study were in line with that of Shitahun (2009) the end of finishing period was decided by considering live weight change of fattening cattle with visual observation based on their feed intake (84.97%) and by anticipating the current and future price (15.03%).

4.3. Season of cattle fattening and marketing

From the total of household responses, majority of the cattle fattening was done starting from mid February up to June (60%) b/c the farmer do not sell fattening cattle at this time due to starting plowing the supply of fattening cattle in the market reduce . In some extent cattle fattening activity was done starting from September to January (40%) targeting to deliver fattened cattle for meskle and Christmas.

The price of beef cattle in Gondar town after fattening on average was 15, 000 ETB. The maximum price recorded during the dry season was 20,000 ETB and the lowest was 10,000 ETB, and during the wet season the maximum price was 13,000 ETB and the lowest was 8,000 ETB.

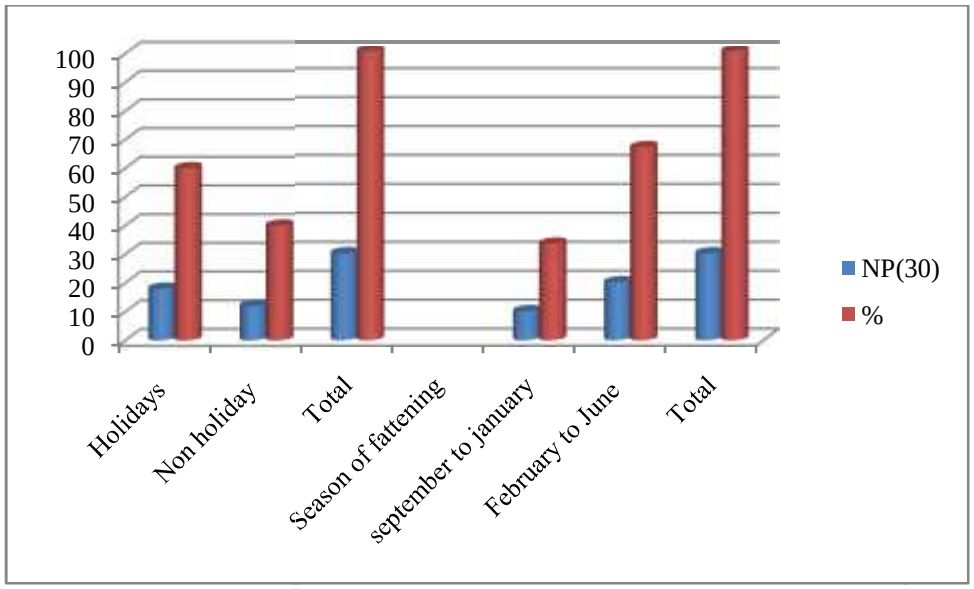

Fig 4.3 seasons of cattle fattening and marketing in Gondar town

Season of cattle fattening was agreed with the reports of Takele *et al* (2009) who reported that cattle fattening was a seasonal operation in welaita with a peak from June to September and this is governed by seasonality pattern of feed availability and main holidays. This low extent of cattle fattening activity for meskle and Christmas market was due to the presence of enough green feed, supply of fattened cattle is greater than the demand and decreased purchasing price of fattening cattle. It was also associated with relative low market demand for fattened cattle because of the custom of the local people preference towards consumption of fattened sheep and goats instead of fattened cattle during Christmas. Starting from July up to August, cattle fattening was totally absent in the study area. However, market price were in contrast with (Belachew, 2004; Takele *et al*., 2009) the market price of fattened cattle was highest from September to April. Reason for this might be due to the availability of the main holidays in September (*meskel),* December *x-mas.* Marketing system of fattening cattle was undar developed due to the knowlege, performance of fattener and little attension given by livestock sub sector.

The fatteners sell their fattened cattle by visual estimation negotiation with customer in the study area. The fatteners sell their fattened cattle by visual estimation negotiation with customer in the study area. The price of fattening cattle depend on weight and age of the animal ,Hence, fattening more closely resemble fattening of culled cows, however, the fattener decide the end of

finishing period of fattening cattle by considering rate of live –weight change in the study area. However this was in agreement with the findings of Alemayehu (2003) who reported that marketing of livestock was not determined on the basis of weight and which was unfavorable marketing system and discourages price on the producers' side.

4.3.1 Marketing channel of beef cattle

Before and after the Holides, animals are taken to local market for selling, on market days. Buying and selling are completed through bargaining practice. In the process of cattle marketing farmer, whole seller, trader and butchers are involved.

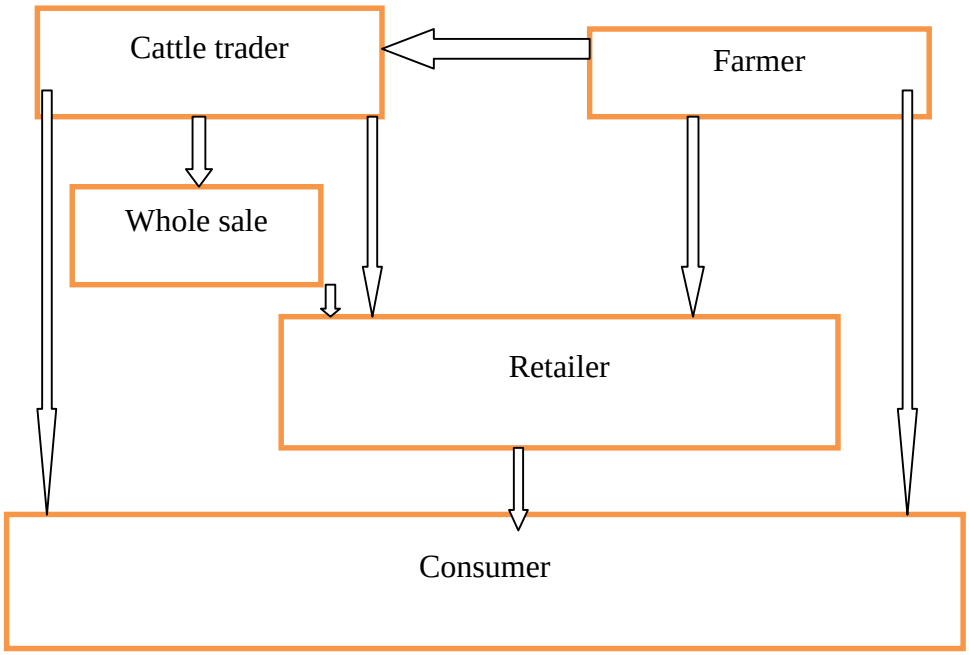

Fig. 4.4 marketing channel of beef cattle in Gondar town

The report of the present study were agreed with that of Rashid (1969) marketing channel referred to the sequential arrangement of various marketing intermediaries involved in the movement of products from producer to consumers

4.4. Feeds and feeding system of fattening cattle in the study area

From the total of household respondents the feed sources which was got from bean straw, nug cake,chick pea ,wheat bran, wheat straw and teef straw, 26.67, 23.33,16.67, 13.33,6.67 and 3.3% respectively in the study area.

Table 3 source of feed for fattening cattle

Feed	**Respondent(N=30)**	**%**
Bean straw	8	26.67
Wheat straw	2	6.67
Barely straw	3	10
Chick pea	5	16.67
Nug cake	7	23.33
Wheat bran	4	13.33
Teef straw and hay	1	3.33
Total	30	100

Similar with the findings of Takele *et al*. (2009) in southern region and Belete *et.al*, (2010) in Amhara region of Ethiopia. Major feed resources used as a basal diet for fattening cattle were crop residues.

4.5. Major constraints affecting cattle fattening in the study area

Farmers have put different constraints that hindered the performance of cattle fattening activity in the study area. Lack of initial capital, shortage of feed, water, land shortage for fattening, health and lack of awareness were (40, 26.67, 16.67,10 and6.67%) respectively.

Table 4.4 factor affect cattle fattening in the study area

Factor	Respondent(n=30)	%
Lack of capital	12	40
Shortage of feed, water	8	26.67
Shortage of land for fattening	5	16.67
Helath	3	10
Lack of awareness	2	6.67
Total	30	100

The present study Similar with the finding of (Belete *et al.* 2010) reported that shortage of capital was the first constraint to cattle fattening in Amhara region of Ethiopia. Getnet (2003) reported that feed quality and quantity is the main limitation to animal production in Ethiopia.

5. CONCLUSION AND RECOMMENDATIONS

The overall results of the present study revealed that the major occupation of households in the study area is on livestock production. Fatteners using oxen for fattening purpose is old, red coat colour and castrated. Farmers purchased fattening cattle based on their good body condition, health, adaptation, breed and big and stand-high hump. The major fattening practice is done starting from mid February up to June. Their feed sources are crop residues and industrial by-products (bean straw, nug cake, chick pea, wheat bran, wheat straw and teff straw). The maximum price record during the dry season and the lowest price is on wet season. The major constraints for fattening practices is lack of initial capital, shortage of feed and water, land shortage for fattening, health and lack of awareness in order of importance. Generally**,** cattle fattening practices is one means of household livelihood improvement in Gondar town. Based on this information, it is recommended that: the government should give due attention on

- ✓ Market channels of fattened animals in Gondar town.
- ✓ Extension policies and strategies on fattening practices.
- ✓ Feed improvement strategies
- ✓ Provide initial capital borrow
- ✓ Training and extension service/advice on beef selection, feeding, healthcare, and market information and further researches on reproductive performance of fattening cattle and carcass quality with related to feeding should be conducted.
- ✓ University of Gondar and livestock research center should conduct a research on fattening improvement in Gondar town.

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7. Appendix

UNIVERSITY OF GONDAR

FACULTIY OF VETNARYMEDICINE

DEPARTEMNT OF ANIMAL PRODUCTION AND EXTENSION

A Graduation Research Questionner on the Title

"Assessment of Cattle Fattening Practice and Marketing System in Gondar Town"

Name of Respondent _____ Keble_____

1. Gender 1. Male 2. Female

2. Marital status 1. Married 2. Single 3. Divorced

3. Age _____ (years)

4. Education level of house hold head 1. Illiterate 2. Reading and writing 3. Elementary school 4. Secondary school 5. Above secondary school 6. Spiritual education

5. Family size and composition 1. Total family size: male _____ female_____

6. What are the sources of income for living?

1. Crop production 2. Livestock production 3.Wage labour

4. Crop and livestock production 5.All 6. Other _____.

A. Cattle Fattening Practice

1. What color of fattening cattle is preferable?

A. White 2. Bulla 3. Black 4.red 5.other

2. What is the breed of your fattening cattle?

A.Horo B.Fogra C. Borena D. Exotic breeds

3. Do you get the required breed at the market?

1. Yes 2. No

4. What is the source of your fattening cattle?

A. Own production B. Immediate purchase for fattening

C. Culled cattle due to old age & being unproductive

5. What type of cattle do you prefer for fattening purpose? (Rank in the order of preference)

A. Old oxen B. Matured oxen C. Young bull D. Old cow E. Unproductive cow.

5.1. What is the reason ----------?

6. How many times do you fatten the cattle per year?

A. Only one time B. Two times C. Three times D. Four times

Why? ----------

7. How many cattle do you fatten per fattening period? ----------

Why? ----------

8 .How do you decide the end of finishing period?

A. By calculating feeding length B. By considering rate of live-weight change

C. Anticipated Current and future price

9. On which months of the year do you prefer to start cattle fattening? ----------

10. In which months of the year do you think is the cattle price become higher and lower?

1. Month high price 2. Month lower price

---------- ---------- ---------- ----------

11. Why do you think is the reason for cattle price variation across months/season?

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12. How do you transport your cattle before and after fattening?

A. On foot B. Using vehicle C. Both foot and vehicle

13. On the average, for how long do you fed the cattle to finish its fattening period?

A. For two months B. For three months C. For four months D. three to four months

14. What are your criteria to selecting the site for cattle fattening practice? In circle

A. Due to land suitability B. No other alternative

C. Free from any contamination D. Proximity to market

15. Which type of cattle fattening system can be performed in Gondar?

A. Stall feeding or hararghe fattening system B. By product based C. Traditional

16. What are your reasons for starting cattle fattening activity?

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17. What type of feeding system do you follow?

1. Cut and carry (Zero grazing) 2. Grazing 3. Other _____ (Specify)

18. What are the sources of water for your beef cattle?

1. Spring 2. Rivers 3. Mechanically assisted 4. Other _____ (Specify)

19. What are the major problems affecting cattle fattening practice in Gondar town?

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20. Do you have fattening cooperative?

A. yes B. No

21.1. If yes what are the advantages for your activity?

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22. How do you fatten the cattle?

A. By you self B. with cooperative C. paired with friends or family

2. Marketing of fattening cattle

1. If purchase, where do you buy your fattening cattle? ----------

2. What criterions have you considered for buying fattening cattle? (Rank in the order of importance)

A. Age of the cattle B. Body size /frame C. Breed D. Health E. Body condition F. Price

G. Color H. Adaptation 1. --------- 2. -------- 3. --------- 4. --------- 5. --------6. ---------7. ------

3. At What age range is preferable for your market? ----------

4. Do you get this age group at the market?

1. Yes 2. No

5. How do you sell your fattened cattle?

A. On live weight B. With negotiation by visual estimation C. Others criteria----------

6. Where do you sell your fattened cattle most of the time? ----------

7. For whom do you sell your fattened cattle most of the time?

A. For individuals/ group consumers B. For local butchers C. retailer D. For whole seller

8. Who do like the market actor? ----------

9. What is the average price of fattened cattle? ----------

10. Is there price fluctuate of fattened cattle?

A. Yes B. No

10.1. In what way? ----------

11. What are the criteria's to purchase these animals from the market?

1. Sex 2.Age 3.Color 4.weight 5.all 6. Other (Specify)

12. Which sex is preferable for your market?

1. Male 2. Female

13. Do you get market information before you sell your cattle?

1. Yes 2. No

14. If yes, from where do you get market information?

1. Extension agent 2. Relatives 3. Cooperatives

4. Neighbors 5. Own markets visit 6. Other (specify)

15. Which source of market information do you prefer?

1. Extension agent 2. Relatives 3. Cooperatives

4. Neighbors 5. Own market visit 6. Other (specify)

16 What is your reason for selecting the specified source(s) of market information?

1. It is accessible 2. It is reliable 3. Other (specify)

17. Who determine the price at the market place?

1. Seller 2. Buyer 3.Broker 4. Negotiation b/n seller and buyer 5. Other (specify)

18. Do you think that there is cattle price difference across different markets in your area?

1. Yes 2. No

18.1. If yes, in which market is the cattle price is higher and lower?

1. Better /higher price at ----------market

2. Lower price ----------market

19. What is your feeling/perception on the prevailing cattle price in your area

1. Very good 2.Good 3.Poor

20. Are you happy with the prevailing cattle price in your area?

1. Yes 2. No

21. If no, what do you think is the solution to improve cattle price in your area?

Mention……

……

22. Who supply cattle for you?

1. Yourself 2. Brokers 3. Farmer 4. Others, please specify

23. What are the channels of market fattening cattle in your area?

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3. Feed of Fattening Cattle

1. What are the major feed sources for fattening cattle (Rank 1, 2, 3)

1. Maize 2.wheat straw 3. Barely straw 4.teef straw 5.hay

5. Chickpea 6.nug cake 7.wheat bran 8.other

2. How many kg of feed required per day for one cattle as average?----------

3. What type of feed can be used as additional feed for your fattening cattle?

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4. **W**hat are the major crop-residues produced in the area?

A. Wheat straw B. Barely straw C. Concentrate D. Chick pea E. Other

5. What type of feeding system do you follow?

1. Cut and carry (Zero grazing) 2. Grazing 3. Other _____ (Specify

Data collected from secondary source

1. How many human populations are there in Gondar town?

Male_____ Female_____ Total_____

2. How many cattle population are there in Gondar town?

Calf---------- Heifer----------Cow----------Bull----------

3. What are the cattle breeds available in Gondar town? ----------

4. What criterions have been used by the producers for buying fattening cattle? ----------

5. What kind of agricultural extension service you provide for them? ----------

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6. What are the major potentials for improvement of cattle fattening practice in Gondar?

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7. What is your general comment on fattening practices in Gondar town?

Thank you very much for your cooperation!!!

8. Declaration

We, the under signed, declare that the information presented here in we senior research project is my original work, has not been presented for degree in any other university and that all source of material used for the research and report have been duly acknowledged.

Name:_____

Signature: _____

Date of submission: _____

This thesis has been submitted for examination with my approval as university advisor

Name :_____

Signature: _____